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ORIGINAL INVESTIGATION

Loneliness in urban neighbourhoods: an Anglo-Dutch comparison

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Abstract Past studies in the UK and the Netherlands indicate that loneliness varies significantly according to characteristics of older people's residential environment. This raises questions regarding potential neighbourhood influences on individuals' social relationships in later life. This article examines neighbourhood influences on loneliness, using multiple classification analysis on comparable empirical data collected in the UK and the Netherlands. UK data arise from a survey of 501 people aged 60+ in deprived neighbourhoods of three English cities. Netherlands data derive from the NESTOR Living Arrangements and Social Network survey, with a sub-sample of 3,508 people aged 60+ drawn from a nationally representative sample of older people, living in 11 municipalities. Both surveys incorporated the 11-item De Jong Gierveld Loneliness Scale. In addition to neighbourhood characteristics and indicators of health and social embeddedness, a typology of eight groups of persons was developed that accounted for individuals' age, sex, and partner status. While 13% of participants in the UK were severely lonely, the proportion in the Netherlands was just four per cent. Mean loneliness scores in the UK varied significantly between the neighbourhoods under investigation. Additionally, the evaluated quality of the residential neighbourhood accounted for a relatively large degree of variance in loneliness in both countries.

Keywords Loneliness · Urban neighbourhoods · Cross-national comparison · England · The Netherlands

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Introduction

An increasing polarisation between and within the advanced industrial world's cities has generated a growing body of research that explores the different types of risk faced by older people in diverse urban settings (Hannan Foundation 2001; Ipsen 1999; Phillipson et al. 2001; Klinenburg 2002; Newman 2003; Scharf et al. 2007). Within this context, this article explores the degree to which a particular type of risk in later life—that of social isolation and loneliness—may be influenced by characteristics of the urban environment.

A heightened risk of isolation and loneliness might reflect the impact of at least three interrelated processes affecting urban areas. First, older people might be adversely affected by changes in the physical fabric of cities. This relates, for example, to the ways in which urban spaces are increasingly developed to meet the needs of affluent, younger consumers (Ipsen 1999; Phillipson 2007: 334). The physical characteristics of some urban areas may no longer be conducive to maintaining the types of social relationships that can protect older people from isolation and loneliness or facilitate good mental health (Evans 2003; Galea et al. 2005). Second, older people's social well-being is prone to changes in population composition. While some urban areas display relatively little population change, others experience high rates of population

turnover. The loss of family members, friends and neighbours—either through out-migration or death—has implications for the maintenance of the stable social relationships that are often highly valued by older people and which can protect against the risks of isolation and loneliness (Ipsen 1999; Phillipson 2007: 323). Third, older people are affected by changes linked to a broad array of social issues within urban neighbourhoods. For example, they may become vulnerable as a result of a changing service infrastructure (Ruston 2002; Patsios 2006), or as a consequence of their perceived vulnerability to crime and a resultant fear of crime (Walters et al. 2004; Scharf et al. 2007). Especially during evenings, older people may be 'edged out' of town centres by the intimidatory presence of groups of younger people (Worpole and Greenhalgh 1996: 13). The fact that there is considerable diversity within and between urban areas in relation to such broad social change raises the likelihood that the social well-being of older people, as reflected in social isolation and feelings of loneliness, will vary between neighbourhood locations.

Social isolation and loneliness are related yet distinct concepts (Victor et al. 2000). Social isolation concerns the objective characteristics of an individual's circumstances, referring to the absence of relationships with other people. The central question concerns the degree to which an individual is alone, with a continuum running from social isolation at one extreme to social participation at the other. Persons with a very small number of meaningful ties are, by definition, socially isolated (de Jong Gierveld et al. 2006). By contrast, loneliness is a subjective and negative experience, representing the outcome of a cognitive evaluation of the match between the quantity and quality of existing relationships and relationship standards. Loneliness can be defined as "a situation experienced by the individual as one where there is an unpleasant or inadmissible lack of (quality of) certain relationships. This includes situations in which the number of existing relationships is smaller than is considered desirable or admissible, as well as situations where the intimacy one wishes for has not been realized" (de Jong Gierveld 1987: 120). The opposite of loneliness is belongingness or embeddedness.

Loneliness is not directly connected to objective social isolation; the association is of a more complex nature (Tesch-Römer 2000; Bond and Corner 2004). Researchers use different theoretical approaches to investigate the mechanisms that connect objective participation in social networks and neighbourhoods on the one hand and subjective experiences of loneliness on the other. Among these is the deficit perspective based on the assumption that different types of relationships serve different unique functions that are not interchangeable and each relationship type directly affects loneliness in a specific way (Weiss 1974). The cognitive perspective focuses on the difference between desired and actually achieved relationships, rather than merely addressing the absence of specific relationships (Dykstra and Fokkema 2007), and it is this theoretical perspective that has proven most appropriate in explaining loneliness. Drawing upon the cognitive approach, analyses focus on subjective cognitive processes that mediate the association between relationship characteristics (number and type) and loneliness (Perlman and Peplau 1981; Dykstra and de Jong Gierveld 1994; de Jong Gierveld et al. 2006). Social comparisons are key to this process, affecting how large and important a social deficit is believed to be (Perlman and Peplau 1981). Neighbourhood factors can affect the intensity of loneliness via the size of individuals' networks of relationships, while variations between neighbourhoods can work directly via differences in mutual concern for co-residents' well-being. As Thomése et al. (2003) show, as such mutual concern and shared feelings of community embeddedness increase, the risk of loneliness at the individual level decreases. As a result, perceived quality of the neighbourhood is broadly seen as one of the crucial factors mediating differences in levels of loneliness.

Social well-being and loneliness can vary considerably between different nations. This is borne out by the empirical evidence, with one European survey suggesting that while 36% of older people in Greece often feel lonely, the equivalent proportion in Denmark is just four per cent (Walker and Maltby 1997). Elsewhere, international comparisons show that around 10% of older people experience severe loneliness (Wenger et al. 1996). Such variations may reflect differences in cultural values that direct people's desires for an optimal network of social relationships, as well as the extent to which loneliness is associated with stigma. We agree with Tesch-Römer and von Kondratowitz (2006) that current research in the field is characterised by little theorising as to whether there should be differences in the ageing process and in the experiencing of satisfying social relationships across countries. Little is also known about the influences of characteristics arising from local and country level policies. Where policies have sought to minimise social and area-based inequalities, one might expect to find that neighbourhood differences in loneliness are relatively low. In her comparison of 15 EU countries, Avramov (2002) explored inequalities relating to older people's households and their risks of poverty. The proportion of older people's households affected by income precariousness before social benefits is 12% in the Netherlands and 52% in the UK. After taking account of social benefits, the respective proportions decreased to 8 and 29% (see also Zaidi et al. 2006). While both countries have succeeded in reducing the proportions of older people's households experiencing income precariousness in recent

years, such households are still much more common in the UK than in the Netherlands and consequently may be more prone to the risk of loneliness. The causal mechanism by which inequality affects well-being operates through people's perceptions of societal fairness, more than directly on its own (O'Rand 2001). As a result, when investigating loneliness, objective characteristics of neighbourhoods as well as perceived characteristics (satisfaction, feeling safe during daytime and at night), as intermediary factors, should be taken into account.

Empirical research shows that the combination of old age and residence in deprived neighbourhoods increases the risks of feeling unsafe, dissatisfied and lonely (Scharf et al. 2004a; Patsios 2006; van der Meer 2006). In the UK, loneliness rates tend to be higher in deprived urban communities than in the country as a whole (Bowling et al. 1991; Victor et al. 2002; Victor and Scharf 2005). Elsewhere, findings are more equivocal. For example, while Moorer and Suurmeijer (2001) report a minimal influence of neighbourhood characteristics on the expression of loneliness in the Netherlands, another Dutch study did find an association between neighbourhood characteristics and loneliness (Deeg and Thomése 2005), with neighbourhood satisfaction and partner status acting as mediators. This points to the need for a more systematic comparison of loneliness among older adults in England (a constituent of the UK) and the Netherlands, with a view to exploring factors that might effect differences in the intensity of loneliness feelings. While England and the Netherlands are broadly similar in terms of their socio-economic development, they differ significantly in relation to a variety of socio-political and contextual factors (Scharf et al. 2004b), belonging to distinctly different 'families of nations' in relation to their public policy regimes (Castles 1993).

In this article we address loneliness of older people. Research has shown that especially adults aged 75 and over, who often are female pensioners living alone and experiencing higher risks of poverty, are more vulnerable to loneliness than others (de Jong Gierveld et al. 2006; Patsios 2006). Those in poor health, whether measured objectively or subjectively, tend to report higher levels of loneliness (Wenger et al. 1996; Tesch-Römer 2000; Havens and Hall 2001). Additionally, social and area-based inequalities may lead to perceptions of relative deprivation, distrust, a sense of powerlessness, social exclusion and loneliness (Kawachi et al. 1997; Ross et al. 2001). This is shown in each of four dimensions, distinguished as: exclusion from adequate resources (that hinder social participation in family and other social contexts), exclusion from the labour market (and related possibilities for social embedment), exclusion from specific public and commercial services (telephone, central heating), and exclusion from social relationships (death of partner, non-participation in groups and clubs) (Cicirelli 1995; Connidis 1989; Dannenbeck 1995; Dykstra and de Jong Gierveld 2004; Havens and Hall 2001; Lopata 1996; Pantazis et al. 2006; Patsios 2006; Pinquart 2003; Pinquart and Sörensen 2001; Wagner et al. 1999; Wenger et al. 1996). Different components of exclusion from social relationships will be addressed in this study. Research has repeatedly shown the protective effect of an intimate partner bond on the physical, financial and mental well-being, including loneliness, of both men and women (Dannenbeck 1995; Wenger et al. 1996). Those who remain alone after the death of the partner or after divorce are specifically at risk of loneliness, and the effects on the intensity of loneliness are recognisable over a long period of time (Lopata 1996; Dykstra and de Jong Gierveld 2004). Moreover, the benefits of belonging to a set of interlocking networks of children, other kin and non-kin can lower the risks of loneliness (Wagner et al. 1999; Pinquart 2003). In general, as the number of relationships in the social network increases the intensity of loneliness decreases.

Past studies have used a variety of approaches to measure loneliness. Observed differences within and between national and international samples in terms of the reported levels of loneliness are likely to reflect differences, for example, in measuring instruments (direct question versus scales) and in sample composition (Victor and Scharf 2005). Against this background, this article seeks to explore the nature of neighbourhood impacts on older people's experience of loneliness. Using a similar methodological approach, but two different environmental contexts, we aim to identify the degree to which the urban environment affects older people's loneliness in two European nations.

Methods

The article utilises highly comparable data derived from empirical studies conducted in England and the Netherlands, and explores predictors of loneliness using multiple classification analysis (MCA).

Respondents

The Netherlands data arise from the 'Living arrangements and social networks of older adults survey' (NESTOR-LSN). In 1992, interviews were conducted with 4,494 men and women born in the years 1903–1937 (Knipscheer et al. 1995). The sample includes older people living independently as well as institutionalised men and women, and was stratified according to sex and birth year. Older people, particularly men, are overrepresented in the sample (Broese van Groenou et al. 1995). For reasons of efficiency and cost

control, the selection of respondents was restricted to three regions: the northeast, the southeast, and the west of the Netherlands. It is important to note that respondents in this sample are not exclusively living in deprived urban neighbourhoods; the sample includes respondents in both urban and rural areas, and in socially deprived and non-deprived areas. The overall response rate was 62%, and the achieved sample was fairly representative of the underlying population (Broese van Groenou et al. 1995). To enhance comparability with the England data, only respondents aged 60 and over are included in this analysis, encompassing 3,508 men and women. Due to missing values on the independent variables the number of respondents involved in the analyses varies between 3,508 and 3,182.

The England data draw on a survey conducted as part of a study of ageing in socially deprived areas of Liverpool, Manchester and the London Borough of Newham (Scharf et al. 2004a). In 2000/2001, interviews were undertaken with men and women aged 60 and over living in nine electoral wards identified as being amongst most deprived in the 1998 Index of Local Deprivation (Department of the Environment, Transport and the Regions 1998). A total of 501 participants were recruited at random through local electoral registers using a coding classification that assigns people to age bands according to the likelihood that their first name belongs to a particular birth cohort (Scharf 2005). The overall response rate was 42%. The number of respondents included in the analyses varies between 500 and 460 as a result of missing values on the predictor variables.

Measuring instruments

Loneliness: In both countries, the degree of loneliness was measured using the De Jong Gierveld Loneliness Scale (de Jong Gierveld and Kamphuis 1985; de Jong Gierveld and van Tilburg 1999a). This consists of five positive and six negative items, each of which is scored dichotomously. An example of a negatively formulated scale item is: "I experience a sense of emptiness around me". An example of a positively formulated item is: "I can rely on my friends whenever I need them". The loneliness scale has a range of 0 (not lonely) to 11 (very severely lonely) and has been shown to be reliable and valid (Pinquart and Sörensen 2001). Based on cutting scores of three and nine the scale is differentiated in three categories of not lonely, moderately lonely and severely lonely people, respectively. The scale also works well in different cultural contexts (de Jong Gierveld and van Tilburg 1999b; Lauder et al. 2004; van Tilburg et al. 2004); neither the content of the loneliness items nor the results of statistical analyses suggest a sense of cultural variation in the differential item functioning (DIF) of these items (van Tilburg et al. 2004). This indicates the suitability of the scale for use in different locations and countries. In this regard, between-country differences can be interpreted as a reflection of differentiations in the social or socio-economic contexts.

Neighbourhood variables: Given the varying national contexts, it is necessary to assess the objective character of neighbourhoods in the two countries using slightly different measures. In the Netherlands, the neighbourhood typology is based on the level of urbanisation as measured by calculating the mean number of addresses per square kilometre within a circle with a radius of one kilometre. Additionally, the highly urbanised communities are differentiated according to region: (1) Oss (a city in the southern part of the country), Zwolle (a city in the northeast of the country), and Amsterdam. In England, where all neighbourhoods were highly urbanised, the equivalent neighbourhood variable identified respondents' place of residence; this encompassed the electoral wards of Clubmoor, Granby and Pirrie (all in Liverpool), Cheetham, Longsight and Moss Side (all in Manchester), and Park, Plashet and St Stephens (all in the London Borough of Newham).

A second neighbourhood variable drew on socio-economic data relating to respondents' neighbourhoods in each country. In the Netherlands, the financial status of neighbourhoods combines information about such factors as income levels, rental costs, and house purchase prices within postcode areas. This information is provided by Geo-Marktprofiel B.V., Weesp, based on data from households with the same postcode and can therefore be equated with the mean income level in respondents' postcode areas. In England, a classification of residential neighbourhoods (ACORN) developed by CACI Ltd. provides broadly equivalent data. As a postcode classification system, it draws on decennial Census data, and includes such variables as home ownership, health profiles, employment, ethnicity and lifestage (CACI 2004). ACORN differentiates between six global area types that broadly reflect the affluence of neighbourhoods, ranging from areas described as 'thriving' to those identified as 'striving'. The classification has been widely used in studies which explore relationships between geo-demographic characteristics and a variety of outcome measures (e.g. Bowling and Stafford 2007; Hedges et al. 1997; Parkes and Kearns 2003; Walker et al. 2006).

In the Netherlands, the perceived quality of neighbourhood variable is a simple summation of the yes answers to three questions: 'Do you generally like living in this neighbourhood?'; 'During the day, do you feel safe to go shopping or for a walk in the neighbourhood?'; and 'At night, do you feel safe if you are out on the street in the neighbourhood?'. A similar approach was adopted in England, albeit drawing on the different variables

available: 'In general, how satisfied are you with this neighbourhood as a place to live?' (5-point scale, with 'very satisfied' and 'satisfied' coded [1], all other responses [0]); 'How safe would you feel if you had to go out alone in this neighbourhood after dark?' (4 response categories, with 'very safe' and 'fairly safe' coded [1], 'a bit unsafe' and 'very unsafe' coded [0]); and an area attachment variable based on responses to two questions identifying area likes and dislikes (respondent identifies only things they dislike about their neighbourhood [0], all other responses [1]). The variable used in this analysis is a summation of responses to the three questions, with scores of 0 or 1 classed as 'low', 2 as 'medium' and 3 as 'high' subjective neighbourhood quality.

Individual variables: For all respondents in the Netherlands and England, data on age at interview and partner status were collected. The typology constructed combines information about the presence or absence of a partner in the household, age (60–74 and 75+), and sex. In both countries the potentially supportive quality of older people's social networks was measured using Wenger's (1994) support network typology. The network assessment instrument takes account of factors which determine the type of support available to older people, including the proximity of close kin, the balance of family, friends and neighbours within the network, and the frequency of contacts with network members. The instrument places people into one of five categories, named according to the older person's relationship to the support network: local family dependent, locally integrated, local self-contained, wider community focussed and private restricted (Wenger 1994).

In the Netherlands, respondents were asked: 'How is your health in general?' Responses were coded as 'very good' and 'good' (1) and 'fair' or 'poor' (2). In England, subjective health was measured with the item: 'Would you say that for someone of your age, your own health is generally …' with response categories ranging from 'very good' to 'very poor'. In this analysis, 'very good' and 'good' are coded (1) and 'neither good nor poor', 'poor' and 'very poor' (2).

Data analysis

For both datasets, MCA was undertaken to examine the interrelationship between predictor variables and mean loneliness scores. MCA uses the results of the analysis of variance procedure to compute adjusted mean values of the outcome variable (loneliness) in subgroups defined by the categories of the predictor variable(s). The technique estimates the mean differences in loneliness scores after adjusting for the predictors in the model. A key advantage of MCA is that, whilst the outcome variable must be interval, the model can handle predictor variables at nominal, ordinal or interval levels of measurement (Andrews et al. 1973). It can also address interrelationships of any form among the predictor variables or between a predictor and the outcome variable. A sequential model was used in order to identify the explanatory potential of factors at each stage of the analysis. The hierarchical model was identical in England and the Netherlands and started with information about objective neighbourhood characteristics (Model 1). A next step introduced a subjective evaluation of the quality of the neighbourhood (Model 2). Individual level characteristics, encompassing sex, age and partner status of respondents, social network type, and subjective health were introduced in Model 3.

Results

Participant characteristics

The Netherlands NESTOR-LSN 1992 sample encompasses men and women aged 60–89. Mean age is 74.4 (SD = 8.4). The 1992 sample represents the first wave of the Longitudinal Ageing Study Amsterdam (LASA). For this reason older people, especially older men, are overrepresented. The effects of this overrepresentation at baseline are shown in Table 1 with 51% of male respondents in the 75+ age group. As is to be expected, the higher percentage of widowed women and men in the 75+ age group as compared to the younger group, is associated with higher percentages of those living alone.

The England sample ranged in age from 60 to 96 years (M = 71.6 years; SD = 8.0). Older residents of deprived urban areas differ from nationally representative population samples in a number of ways. While the gender distribution of respondents broadly reflects the national pattern, differences arise in relation to other socio-demographic factors (Table 2). Compared with national data, markedly fewer older people in deprived areas were married or living as a couple, and there were higher proportions who were widowed, divorced or separated, or who had never married. The proportion of those who live alone is higher in the deprived areas sample.

Loneliness in cross-national comparison

Initial analysis of the levels of loneliness in the two samples shows a higher degree of loneliness in the England deprived areas study; mean scores range from 2.6 in Pirrie to 6.2 in Cheetham, with an overall mean of 3.97 (SD = 3.5; $n = 500$). Loneliness in deprived neighbourhoods of Manchester is higher than in Liverpool and London (Table 3). The deprived nature of the English

Table 1 Sample characteristics, Netherlands

	NESTOR - LSN Survey 1992	
	60–74 years $N = 1{,}670$	75 and over $N = 1{,}838$
Sex (%)		
Male	47	51
Female	53	49
Marital status (%)		
Single	6	7
Married/cohabiting	71	44
Widowed	18	46
Separated/divorced	6	3
Household composition (%)		
Without partner in household	28	56
Network size (mean)	14	12
Health (%)		
Reporting fair or poor	31	44
Reporting (very) good	69	56
Perception neighbourhood quality (%)		
Reporting low	4	6
Reporting medium	19	29
Reporting high quality	77	65

Source: Nestor Living Arrangements and Social Networks Survey, 1992

study areas is reflected in a concentration of respondents in the three ACORN categories of the lowest socio-economic level. Given the neighbourhoods' similar socio-economic profiles, it is not surprising that loneliness scores hardly vary between areas according to their ACORN profile. Overall, in the England deprived areas study, 44% of older people were identified as not being lonely, 43% as moderately lonely and 13% as severely lonely. By contrast, in the Netherlands study, 62% of older people were not lonely, 34% moderately lonely and 4% severely lonely. Mean loneliness scores range from 2.1 in low-ubanised neighbourhoods of the Netherlands to 2.9 in Amsterdam with Oss and Zwolle in a middle position; the overall mean is 2.45 (SD = 2.7; $n = 3508$). A significant relationship was also shown between financial characteristics of neighbourhoods and loneliness. Mean loneliness scores differed between 2.1 for the most affluent areas as compared to 2.8 for the neighbourhoods with the lowest financial resources.

In the Netherlands study, the MCA analysis showed that the typology of neighbourhoods is significantly related to loneliness in Model 1 (Table 4). Older people in low urbanised neighbourhoods have lower mean loneliness scores; those in medium urbanised neighbourhoods in Zwolle and especially in the highly urbanised neighbourhoods of Amsterdam have significantly higher loneliness scores. The financial status of neighbourhoods is also important: older people living in the financially better off neighbourhoods have significantly lower loneliness scores, as compared to their peers in the financially more deprived neighbourhoods, whose loneliness scores are higher. While the degree of urbanisation and the financial status of neighbourhoods influence the intensity of loneliness, Model 1 explained just two per cent of variance in loneliness scores. In the England deprived areas study, the socio-economic classification of neighbourhoods is not statistically related to loneliness in any of the models (Table 5). This is to be anticipated given the generally low socio-economic status of the study areas. However, significant area variations can be identified at the electoral ward level. These remain significant across each of the three models. While respondents in five electoral wards (three in London, two in Liverpool) consistently report lower loneliness scores, in four wards (three in Manchester, one in Liverpool) loneliness is always above the grand mean. This suggests that even between neighbourhoods that are fairly similar in socio-economic terms, the local

Table 2 Sample characteristics, England: older people in deprived areas and Great Britain

	General Household Survey 2000/2001		Deprived Areas Survey 2000/2001	
	60–74 years $N = 7{,}590{,}493$	75 and over $N = 3{,}888{,}338$	60–74 years $N = 312$	75 and over $N = 185$
Sex (%)				
Male	48	38	44	35
Female	52	62	56	65
Marital status (%)				
Single	6	7	11	8
Married/cohabiting	68	40	50	25
Widowed	17	49	27	61
Separated/divorced	8	4	12	6
Household composition (%)				
Living alone	26	50	39	64

Overall sample size reduced from 501 to 497 persons due to missing age data

Sources: General Household Survey 2000/01 (weighted data) and Deprived Areas Survey 2000/2001

Table 3 Levels of loneliness by neighbourhood; England and Netherlands (%)

	Mean loneliness (0 → 11)
England[a]	
London	
St Stephens	3.1
Park	3.2
Plashet	3.9
Liverpool	
Pirrie	2.6
Clubmoor	3.2
Granby	4.2
Manchester	
Moss Side	4.3
Longsight	5.1
Cheetham	6.2
	Overall mean: 4.0
	Sign.differences, $P < 0.000$
Financial status of neighbourhood:	
Rising/settling	4.1
Aspiring	3.9
Striving	4.0
	Overall mean: 4.0
	No significant differences
Netherlands[b]	
Low urbanised	2.1
Medium urbanised	2.4
Highly urbanised	
Oss	2.5
Zwolle	2.8
Amsterdam	2.9
	Overall Sign. differences, $P < 0.000$
	mean: 2.4
Financial status of neighbourhood:	
More than twice modal	2.1
Twice modal	2.2
Modal	2.5
Low	2.7
Minimum	2.8
	Overall mean: 2.4
	Sign. differences, $P < 0.01$

Measured using the 11-item De Jong Gierveld Loneliness Scale (range 0–11)

[a] Data arise from the deprived areas survey, conducted in 2000/2001

[b] Data arise from the NESTOR-LSN study, conducted in 1992

context influences the degree to which older people experience loneliness. Overall, the two neighbourhood variables comprising Model 1 explained 9% of variance in loneliness.

Model 2 includes the subjective evaluation of the quality of the neighbourhood. In both the Netherlands and England, this variable is significantly related to loneliness, and in the same way. Older people who evaluate the quality of their neighbourhood as low display significantly higher loneliness scores than those whose neighbourhood evaluations are more positive. This pattern continues through Model 3 in both nations. In the Netherlands, with the introduction of the subjective neighbourhood evaluation, the urban neighbourhood typology no longer has a statistically significant relationship to loneliness, indicating that the significant relationship between neighbourhood and loneliness is mediated by the subjective evaluation of the quality of the neighbourhood. In England, however, variations between urban neighbourhoods—as reflected in the different electoral wards—remain significant across the three models. In the Netherlands, Model 2 explains an additional 4%, bringing the total to 6% of explained variance in loneliness. In England, the equivalent proportion of total explained variance after Models 1 and 2 is 15%.

Model 3 introduces demographic variables to the explanation. The eightfold typology is significantly related to loneliness in both countries. Older people living with a partner consistently have lower mean loneliness scores than those living alone. In particular, men without a partner—especially those aged 75 and over—are at greatest risk. Model 3 also incorporates measures of respondents' social networks and their subjective health. A significant relationship exists between loneliness and individuals' social network types. Using Wenger's typology, average loneliness scores are lowest for those integrated in the community (locally integrated and wider community focused). Taken together, the multivariate analysis explained 17 and 25% of the variance in loneliness scores, respectively, in the Netherlands and England.

Discussion

The discussion of these results should be framed within the context of several limitations associated with the research. For England, the initial description of the deprived areas sample of older people illustrates some of the key ways in which this group differs from the older population of Great Britain in general. While this confirms the need to explore the experience of ageing in different environmental settings, it also emphasises the limits to which it is possible to generalise findings to the older population of England as a whole. Moreover, while the achieved response rate of 42% represents a good outcome in geographic areas sometimes neglected by social researchers on the grounds of high population turnover and interviewer safety, it is not possible to comment on the characteristics of non-respondents.

Table 4 Results from MCA analyses, hierarchical models on loneliness (Nestor 1992, Netherlands)

	n	Model 1		Model 2		Model 3	
		Dev[a]	*F*	Dev[a]	*F*	Dev[a]	*F*
Urban typology of neighbourhood							
Low urbanised	1,239	−0.31		−0.11		−0.06	
Medium urbanised	763	−0.08		−0.02		0.06	
Highly urbanised neighb. in Oss	211	0.05		0.06		−0.05	
Highly urbanised neighb. in Zwolle	167	0.28		0.18		0.05	
Highly urbanised neighb. in Amsterdam	950	0.41		0.12		0.03	
			10.403***		1.117		0.285
Financial status of neighbourhood (based on postal codes)							
Minimum	219	0.25		0.20		−0.03	
Low	924	0.18		0.12		−0.05	
Modal	1,379	0.02		0.03		0.07	
Twice modal	681	−0.31		−0.24		−0.09	
More than twice modal	127	−0.32		−0.26		0.15	
			4.269**		2.539*		0.666
Perceived quality of neighbourhood							
Low	167			1.83		1.33	
Medium	807			0.55		0.34	
High	2,343			−0.32		−0.21	
					66.448***		31.057***
Demographic characteristics							
No partner, 75+ , female	613					0.38	
No partner, 75+ , male	272					1.66	
No partner, 60–74, female	309					0.56	
No partner, 60–74, male	93					1.15	
Partner in hh, 75 + , female	175					−0.27	
Partner in hh, 75 + , male	532					−0.26	
Partner in hh, 60–74, female	525					−0.60	
Partner in hh, 60–74, male	663					−0.66	
							34.104***
Social network type (Wenger)							
Locally integrated	838					−0.45	
Family dependent	645					0.49	
Local self-contained	1,129					0.07	
Wider community focused	170					−0.45	
Private restricted	274					0.20	
							14.963***
Subjective health							
Fair or poor	1,213					0.51	
(Very) good	1969					−0.31	
						77.550***	
n		3,330		3,317		3,056	
R^2		0.02		0.06		0.17	

[a] Deviation from grand mean (2.41)

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

The Netherlands dataset is limited in that it did not explicitly focus on deprived neighbourhoods, but is based on a broader sample frame. Moreover, in the selection of three regions in the Netherlands, it included deprived neighbourhoods in Oss, Zwolle and Amsterdam, but failed to include neighbourhoods in other cities or municipalities.

Table 5 Results from MCA analyses, hierarchical models on loneliness ($n = 500$; Deprived areas study 2000/2001, England)

	n	Model 1		Model 2		Model 3	
		Dev[a]	*F*	Dev[a]	*F*	Dev[a]	*F*
Urban neighbourhood							
London							
St Stephens	49	−0.83		−1.06		−1.15	
Park	59	−0.74		−0.71		−0.38	
Plashet	58	−0.10		−0.27		−0.07	
Liverpool							
Pirrie	55	−1.38		−1.27		−.77	
Clubmoor	56	−0.79		−0.84		−0.67	
Granby	56	0.26		0.23		0.23	
Manchester							
Moss Side	56	0.28		0.39		0.20	
Longsight	56	1.07		1.04		0.91	
Cheetham	55	2.18		2.42		1.82	
			5.951***		7.110***		3.786***
Socio-economic status of neighbourhood (ACORN)							
Rising/settling	53	0.11		0.04		0.40	
Aspiring	59	−0.04		0.05		0.01	
Striving	388	−0.01		−0.01		−0.06	
			0.032		0.010		0.402
Perceived quality of neighbourhood							
Low	148			1.16		0.92	
Medium	224			−0.08		−0.13	
High	128			−1.21		−0.88	
					17.899***		9.624***
Demographic characteristics							
No partner, 75 + , female	112					0.47	
No partner, 75 + , male	38					1.57	
No partner, 60–74, female	123					0.07	
No partner, 60–74, male	64					0.90	
Partner in hh, 75 + , female	14					−1.25	
Partner in hh, 75 + , male	36					−0.26	
Partner in hh, 60–74, female	86					−0.73	
Partner in hh, 60–74, male	102					−0.95	
							3.605**
Social network type (Wenger)							
Locally integrated	124					−0.14	
Family dependent	151					−0.55	
Local self-contained	66					0.70	
Wider community focused	24					−0.92	
Private restricted	95					0.81	
							3.739**
Subjective health							
Fair or (very) poor	246					0.47	
(Very) good	214					−0.54	
							10.321**
n		500		500		460	
R^2		0.09		0.15		0.25	

[a] Deviation from grand mean (3.97)

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Nevertheless, this study reflects a worthwhile scientific undertaking in that two European countries, that are characterised by many parallel demographic and social developments, are now compared in relation to the social well-being of their older populations. Both countries have largely succeeded in guaranteeing a basic level of income for older people's households with precarious income levels. Despite the impact of their welfare systems, there are urban neighbourhoods in both countries that can be characterised as socially deprived; and a high proportion of the population of these neighbourhoods consists of older adults. This article represents an attempt by social researchers in both countries to investigate jointly the factors that explain why some older adults are doing well and feel socially embedded while others in the same community are experiencing social isolation and loneliness. In this study, data from England and the Netherlands are available that are largely comparable in the variables included in the design, especially in relation to the dependent variable (loneliness) that has been assessed using the same measuring instrument. While the fieldwork for each survey has been 10 years apart, we are convinced that some of the principal components of loneliness are timeless such as the availability of a partner in the household and health condition. However, the comparison is further limited in that the time elapsed might have changed the composition of neighbourhoods. Moreover, despite an attempt to attain a high level of comparability, differences between the two datasets in the construction of variables represent a further limitation.

Notwithstanding such limitations, this study provides further valuable evidence of cross-national differences and similarities in relation to older people's experiences of loneliness. Using the same measurement approach, mean loneliness scores in the England deprived areas study were significantly higher than in the Netherlands study. While 13% of participants in England were severely lonely, the corresponding proportion in the Netherlands was just four per cent. The England findings correspond closely with those of earlier neighbourhood studies (Bowling et al. 1991). In general, the analysis confirms the existence of variations between nations in relation to the incidence and intensity of loneliness (Walker and Maltby 1997; Wenger et al. 1996).

Despite significant cross-national differences in overall loneliness scores, the multivariate analyses show some remarkable similarities between the England deprived areas study and the Netherlands study in the mechanisms that connect neighbourhood characteristics and loneliness. Model 1 shows that the neighbourhood variable based on socio-economic/financial status was significantly associated with loneliness in the Netherlands. In the England dataset, the concentration of respondents in a relatively limited range of (deprived) neighbourhoods is likely to be responsible for the limited variation and non-significance of this predictor. Note that individual income levels are not taken into account in this study, but our colleagues used the same data set to explore the interrelationship between personal income levels, mean neighbourhood income level and physical and mental health (see Deeg and Thomése 2005). More general differences between neighbourhoods, as reflected in the distinction between electoral wards and the urban typology, appear more important. This is especially the case in England, where marked differences persist between neighbourhoods across each of the models. In the Netherlands, the urban typology variable is significant in Model 1 but not in Models 2 and 3. In England, the analysis suggests that—even between deprived neighbourhoods—factors linked to the local context underpin significant variations in loneliness. While there is no straightforward explanation for such variation, and there is clearly scope for further research around this finding, it is likely that the complex interplay of factors linked to the physical environment (such as housing conditions and the presence of amenities), population composition (for example, social and ethnic mix), the rate of population turnover, the impact of social problems (such as crime), and policy-making at the local level may be influential. However, these factors are difficult to disentangle and, if viewed in isolation, prone to misinterpretation. This can be illustrated with reference to neighbourhood population characteristics. Drawing on data from the UK census in 2001, it is evident that the five neighbourhoods with below-average loneliness scores (Clubmoor and Pirrie in Liverpool, and Park, Plashet and St Stephens in Newham) differ significantly in relation to the ethnic composition of their populations. Clubmoor and Pirrie are the least ethnically diverse, with over 98% of the population describing themselves as being 'white'. Park, Plashet and St Stephens have the highest proportions of ethnic minority residents (over 70% being 'non-white'). By contrast, the neighbourhoods with the highest loneliness scores (all Manchester wards and Granby in Liverpool) had proportions of non-white populations ranging from 38% (in Granby) to 53% in Longsight. Moreover, there was no clear connection between population change in neighbourhoods between 1991 and 2001 censuses and loneliness, with above- and below-average loneliness scores registered in wards with substantial population decline (i.e. both Moss Side and Clubmoor experienced a population decrease of 16% between these dates). Also of potential relevance in explaining neighbourhood differences in loneliness might be the impact of public policy processes at local level. For example, when redeveloping its social housing stock, the local authority in Newham adopted a policy of relocating former neighbours together (Cattell 2001: 1504), thus

facilitating the maintenance of existing social networks. This was in stark contrast to a housing policy adopted in parts on Manchester from the 1960s onwards, which led to social dislocation and a loss of community (Cooper et al. 2004). However, here too we would caution against simplistic uni-dimensional interpretations of the source of neighbourhood influences on loneliness rates. In essence, we share the view of Parkes and Kearns (2006: 15), albeit when discussing health outcomes, that survey data increasingly need to be "complemented by detailed neighbourhood case studies in order to elucidate potential mechanisms for neighbourhood effects on health for particular groups in specific residential contexts". The same statement applies in relation to neighbourhood effects on social well-being in disadvantaged neighbourhoods in England.

In general, the influence of the residential neighbourhood on loneliness scores was less important in the Netherlands than England. The strong focus in the Netherlands on minimising the emergence of area-based social inequalities, realised through social benefit policies focusing on households with income precariousness, might contribute to the relatively limited neighbourhood differences in this country. On the other hand, we have to be aware of the fact that our research outcomes are directly connected to the limited number of neighbourhood characteristics included in the design; other characteristics might result in larger variations in loneliness scores.

The influence of the subjective quality of neighbourhood variables was significant in both the England and Netherlands studies, and followed a similar pattern. In both countries, older people who evaluated their neighbourhood negatively tended to have higher loneliness scores than those whose neighbourhood quality was judged to be high. The evaluated quality of the residential neighbourhood remained significant across the three models and accounted for a relatively large degree of variance in loneliness scores in both countries. In the Netherlands, the significance of the 'objective' neighbourhood variables declined after inclusion of the subjective quality of neighbourhoods, becoming non-significant. Hence, the subjective quality of neighbourhoods here is to be considered as the mediator of the association between objective neighbourhood variables and loneliness. In England, the subjective neighbourhood variable also contributes significantly to the explanation of loneliness. These outcomes support the cognitive approach to loneliness as outlined above. As anticipated, the subjective evaluation of one's participation in the social network and in the neighbourhood functions as the mediator between objective characteristics of the social network and the neighbourhood and the experience of loneliness.

Analysis of the influence of participants' demographic characteristics reveals remarkable similarities between the two samples under investigation. The deviations from the grand mean in both England and the Netherlands consistently operate in the same direction, and, in some cases, are of a similar magnitude across the different categories. Men without a partner are at greatest risk of loneliness in both samples. Having a partner in the household is consistently associated with lower rates of loneliness. Despite some variation in deviations from the grand mean between the two countries, the pattern is essentially the same, and lends weight to existing research linking loneliness to older people's demographic characteristics (age, gender and partner status) (Dannenbeck 1995; Wenger et al. 1996; de Jong Gierveld et al. 2006).

Turning to social network characteristics, as might be anticipated, the structure of social networks was significantly related to loneliness scores in both nations. Respondents with a wider community focused network type had the lowest loneliness scores in each country. According to Wenger (1994), the wider community focused network type tends to be larger than average, and is characterised by active relationships with relatives who live a long way away and with friends and neighbours, and by a high level of community engagement. However, such networks are associated with relatively high socio-economic status and occurred fairly infrequently in the deprived areas that formed the focus for the English study. By contrast, respondents with more limited network types in terms of size and supportive quality (private restricted) displayed significantly higher levels of loneliness. These findings highlight once again the importance of social networks, and by extension social embeddedness, in protecting older people from loneliness (Wenger et al. 1996; Wagner et al. 1999).

In terms of the three models, the total explained variance is somewhat higher in the England deprived areas dataset than in the Netherlands dataset. This suggests that neighbourhood differences may be more important in terms of explaining variations in loneliness scores in England than in the Netherlands. However, this finding merits closer scrutiny in future comparative studies, potentially taking on board a broader array of neighbourhood characteristics.

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